WASHINGTON AGRICULTURAL CHEMICAL USAGE ASPARAGUS August 2001

WASHINGTON AGRICULTURAL STATISTICS SERVICE

U.S. Department of Agriculture
Washington Agricultural Statistics Service
P.O. Box 609, Olympia, WA 98507

ASPARAGUS

Results of the 1998 and 2000 Vegetable Chemical Use Surveys are presented in the following tables. The 2000 survey was designed to collect data on chemical applications made after the end of the 1999 harvest through completion of the 2000 harvest from a sampling of vegetable crops in Washington. Targeted crops for Washington included asparagus, processing lima beans, fresh and processing carrots, sweet corn for processing, dry onions, processing green peas, and strawberries. The probability nature of the survey allowed for estimates that are representative of chemical use on all targeted vegetables in the state.

Survey results include estimates of total area treated, number of applications, rates per application, rates per crop year, and total pounds of chemicals applied. Data were summarized for the active ingredients of pesticides and other chemicals applied. Pesticide data were collected for specific formulations of active ingredients (trade name products) and then converted to active ingredient. Therefore, the estimates associated with a particular active ingredient may represent applications of several trade name products. Pesticide application rates also reflect partial coverage applications as a result of band, spot, and alternate row spraying techniques.

Four states were surveyed for **asparagus** in 2000: California, Michigan, New Jersey, and Washington. Surveyed acreage totaled 81,900 acres and Washington accounted for 28 percent of total surveyed acreage. All estimates are for asparagus of bearing age only.

Herbicides were applied to 84 percent of the planted acreage in the four surveyed states, with the greatest coverage in Michigan at 96 percent. Diuron was applied to 50 percent of the crop, and the next most used herbicide, glyphosate, was applied to 38 percent. Insecticides were also applied to 84 percent of the asparagus acres. The lowest coverage was in Washington, at 70 percent of the planted acres being treated. Michigan applied insecticides to the largest percentage of the crop, 97 percent. Overall, fungicides were used on 42 percent of the acreage. Michigan applied fungicides to 79 percent of its asparagus. California had the largest acreage planted to asparagus and had a relatively low fungicide use. Due to budget constraints, fertilizer data was not collected during the 2000 survey period, as it has been in the past

Asparagus: Agricultural Chemical Applications, Washington, 1998 & 2000 1/

Agricultural Chemical 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	1998	2000	1998	2000	1998	2000	1998	2000	1998	2000
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
2, 4-D	5	6	1.2	1.0	0.75	0.69	0.90	0.74	1.1	1.0
Clopyralid	6	-	1.0	-	0.17	-	0.17	-	0.2	-
Dicamba	4	5	1.4	1.2	0.19	0.18	0.27	0.22	0.2	0.2
Diuron	47	59	1.0	1.1	1.38	1.18	1.45	1.40	15.5	19.0
Glyphosate	-	28	-	1.0	-	0.82	-	0.87	-	5.6
Linuron	15	-	1.4	-	0.61	-	0.89	-	3.1	-
Metribuzin	36	53	1.3	1.2	0.80	0.87	1.11	1.06	9.2	13.0
Parquat	7	17	1.0	1.0	0.67	0.60	0.68	0.60	1.1	2.3
Trifluralin	59	47	1.0	1.0	1.12	1.15	1.13	1.18	15.4	12.6
Insecticides										
Carbaryl	35	-	1.0	-	1.02	-	1.09	-	8.8	-
Dimethoate	-	6	-	2.2	-	0.52	-	1.15	-	1.6
Disulfoton	-	50	-	1.5	-	0.94	-	1.44	-	16.7
Malathion	9	15	1.0	1.0	0.88	1.14	0.92	1.21	1.9	4.1

1/ Planted acres in 1998 and 2000 for Washington were 23,000 acres for both years.

2/ Insufficient reports to publish data for the following agricultural chemicals: 1998: Herbicides: Atrazine, Fluazifop-P-butyl, Glyphosate, MCPA, Norflurazon, Pendimethalin, Sethoxydim, Terbacil. Insecticides: Chlorpyrifos, Diazinon, Dimethoate, Fonofos, Methoxychlor, Permethrin. Fungicides: Iprodione, Mancozeb, Metalaxyl. 2000: Herbicides: Alachlor, Clopyralid, Linuron, MCPA, Norflurazon, Quizalofop-ethyl, Simazine, Terbacil. Insecticides: Carbaryl, Chlorpyrifos, Diazinon, Endosulfan. Fungicides: Mancozeb.

3/ Refers to acres receiving one or more applications of a specific agricultural chemical. Note: Data may not multiply across due to rounding.

ASPARAGUS: PESTICIDE APPLICATIONS, TOTAL ACREAGE & PERCENTAGE RECEIVING APPLICATIONS, MAJOR STATES & TOTAL, 1998 & 2000

State	Planted Acreage		Area Receiving 1/							
			Herbicides		Insecticides		Fungicides		Other Chemicals	
	1998	2000	1998	2000	1998	2000	1998	2000	1998	2000
	Acres		Percent							
California	34,000	40,900	66	73	45	87	-	34	**	**
Michigan	18,000	17,000	99	96	93	97	75	79	**	**
New Jersey	1,000	1,000	86	88	90	73	**	**	**	**
Washington	23,000	23,000	91	94	78	70	44	**	**	**
TOTAL	**76,000**	**81,900**	**81**	**84**	**67**	**84**	**39**	**42**	**	**

*1/ Refers to acres receiving one or more applications of a specific pesticide class. ** Insufficient reports to publish percent of area receiving.*

Asparagus: Agricultural Chemical Applications, Major States, 1998 & 2000 1/

Agricultural Chemical 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	1998	2000	1998	2000	1998	2000	1998	2000	1998	2000
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
2, 4-D	15	9	1.2	1.1	1.15	1.06	1.38	1.24	16.2	9.3
Clopyralid	2	1	1.0	1.1	0.17	0.13	0.17	0.16	0.2	0.1
Dicamba	2	3	1.2	1.1	0.21	0.24	0.26	0.27	0.4	0.6
Diuron	51	50	1.2	1.3	1.30	1.38	1.62	1.91	62.7	77.5
Fluazifop-P-butyl	*	1	1.0	1.1	0.16	0.14	0.16	0.15	0.1	0.2
Glyphosate	36	38	1.3	1.3	0.80	0.83	1.11	1.15	30.0	35.4
Linuron	19	11	1.3	1.2	0.80	1.04	1.09	1.31	15.5	12.0
Metribuzin	25	37	1.4	1.3	0.61	0.68	0.90	0.94	17.3	28.8
Napropamide	1	*	1.5	1.1	1.47	1.35	2.29	1.52	0.9	0.2
Norflurazon	7	5	1.2	1.4	1.86	1.23	2.32	1.83	11.7	7.7
Paraquat	15	9	1.1	1.1	0.60	0.59	0.71	0.66	8.1	5.1
Sethoxydim	4	2	1.1	1.3	0.32	0.29	0.38	0.40	1.3	0.7
Simazine	9	2	1.4	1.1	1.08	1.14	1.57	1.28	11.1	1.6
Terbacil	2	2	1.0	1.2	0.53	0.54	0.53	0.66	0.7	1.1
Trifluralin	21	27	1.0	1.1	1.15	1.32	1.20	1.49	19.5	32.4
Insecticides										
Carbaryl	33	32	2.1	2.9	0.80	0.76	1.74	2.23	44.0	58.3
Chlorpyrifos	10	23	1.0	1.2	0.80	0.93	0.86	1.17	6.7	22.1
Dimethoate	-	2	-	2.2	-	0.52	-	1.15	-	1.6
Disulfoton	39	51	1.7	1.4	0.95	0.96	1.66	1.43	49.1	59.4
Fonofos	1	-	1.3	-	2.80	-	3.62	-	2.1	-
Malathion	4	9	1.6	1.0	1.00	1.16	1.62	1.26	4.5	9.1
Methomyl	1	4	2.2	1.5	0.59	0.76	1.31	1.16	1.1	3.4
Permethrin	12	12	2.2	3.0	0.08	0.09	0.17	0.27	1.6	2.5
Fungicides										
Chlorothalonil	13	13	2.3	3.6	1.32	1.54	3.11	5.63	31.0	61.5
Mancozeb	24	18	1.6	2.4	1.40	1.40	2.28	3.40	42.0	49.6
Mefenoxam	6	3	1.3	1.2	0.37	0.47	0.48	0.60	2.4	1.7
Myclobutanil	-	11	-	1.3	-	0.10	-	0.14	-	1.2
Sulfur	-	5	-	2.4	-	11.44	-	27.95	-	113.3

** Applied on less than one percent of acres.*

1/ Planted acres in 1998 and 2000 for the four major states were 76,000 acres and 81,900 acres, respectively. States included in 1998 and 2000 were CA, MI, NJ, & WA.

2/ Insufficient reports to publish data for the following agricultural chemicals: 1998: Herbicides: Atrazine, MCPA, Pendimethalin. Insecticides: Azinphos-methyl, Bt (Bacillus thur.), Carbofuran, Diazinon, Dimethoate, Fenamiphos, Methoxychlor, Oxamyl, Piperonyl butoxide, Pyrethrins, Rotenone. Fungicides: Basic copper sulfate, Copper hydroxide, Fenbuconazole, Iprodione, Maneb, Metalaxyl, Myclobutanil, Sulfur, Triforine. Other Chemicals: Metaldehyde. 2000: Herbicides: Alachlor, Glyphosate, is. Salt, MCPA, Quizalofop-ethyl, Sulfosate. Insecticides: Bt (Bacillus thur.), Diazinon, Endosulfan, Esfenvalerate, Fonofos, Neem oil, Petroleum distillate. Fungicides: Copper ammonium, Copper hydroxide, Maneb, Metalaxyl, Metiram. Other Chemicals: Cytokinins, Indolebutyric acid, Potassium gibber..

3/ Refers to acres receiving one or more applications of a specific agricultural chemical. Note: Data may not multiply across due to rounding.